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| 1. Describe how covalent compound form. | 1. Covalent compounds form when nonmetal atoms share electrons in order to achieve a stable octet. |
| 1. How are the melting points and point points of covalent compounds different from ionic compounds? | 1. The melting and boiling points of covalent compounds are lower than ionic compounds. |
| 1. What is the difference between a structural formula and a molecular formula? | 1. A molecular formula tells you how many and what types of atoms are in a molecule.   A structural formula tells you how the molecule is put together. |
| 1. List the seven diatomic molecules | 1. Hydrogen, nitrogen, oxygen, fluorine, chlorine, bromine and iodine |
| 1. Name the type of bond that shares only two electrons. | 1. Single covalent bond. |
| 1. Name the type of bond that shares four electrons. | 1. Double covalent bond. |
| 1. Name the type of bond that shares six electrons. | 1. Triple covalent bond |
| 1. This is a name for a pair of valence electrons that are not shared between atoms. | 1. Answers include: unshared pair, lone pair, or nonbonding pair. |
| 1. Name the type of bond that is formed when both of the shared electrons come from one of the bonding atoms. | 1. Coordinate covalent bond. |
| 1. Define polyatomic ion | 1. A tightly bound group of atoms that has a positive or negative charge and behaves as a unit. |
| 1. List the following bonds from the strongest to the weakest.   Single bond, double bond, triple bond, and coordinate covalent. | 1. Triple bond, double bond, single bond, coordinate covalent |
| 1. List the following bonds from the shortest to the longest:   Double bond, single bond, triple bond | 1. Triple bond, double bond, and single bond. |
| 1. Define resonance structure | 1. A resonance structure is a structure that occurs when it is possible to draw two or more valid electron dot structures that have the same number of electron pairs for a molecule or ion. |
| 1. List the 5 basic geometries that an atom can have. | 1. Linear, trigonal planar, tetrahedral, trigonal bipyramidal, and octahedral |
| 1. According the VSEPR Theory, why do electron pairs adjust position to be as far apart as possible? | 1. VSEPR theory says that electron pairs repel each other. That causes them to spread as far apart as possible. |
| 1. What is the name of a bond where the electrons are shared equally between the bonding atoms? | 1. Nonpolar covalent bond |
| 1. What is the name of a bond where the electrons are shared UNEQUALLY between the bonding atoms? | 1. Polar covalent bond or polar bond |
| 1. What property of two atoms is used to determine whether they will form a polar bond? | 1. The electronegativity of the two atoms is used to determine if they will form a polar bond. |
| 1. List a property of covalent compounds. | 1. Answers can include: low melting point, low boiling point |